

Preventing cold stress on the jobsite

Winter is calling, and you know what that means.... Sub-zero temperatures are on their way!

As the transition from fall to winter seems to get shorter each year, it's important for employers to monitor the wind chill temperatures in order to gauge workers' exposure risks and plan how to safely do the work at hand. Environmental cold does not discriminate and it can affect any worker exposed to cold air temperatures, putting them at risk for cold stress.

Cold stress occurs when the internal body temperature reaches a point where the body is unable to warm itself. Serious cold-related illnesses and injuries can occur, including permanent tissue damage or death.

So what types of illnesses are associated with cold stress?

Immersion/Trench Foot

Immersion/Trench Foot is an injury to the foot caused by prolonged exposure to wet and cold conditions. It does not require freezing temperatures to cause damage. Symptoms include red skin, numbness or tingling, pain in legs or feet, swelling, and blisters. Treatment of immersion/trench foot requires medical attention. Remove your wet boots and socks, dry your feet (avoid working the skin), and keep weight off your feet until evaluated by a medical professional.

Frostbite

Frostbite occurs when the skin and tissue of an area freezes. It can result in permanent damage to the body, and in severe cases, result in amputation. Signs of frostbite are reddened skin with gray or white patches, tingling or aching, loss of feeling, and blistering. The affected site is generally found on fingers, toes, the nose, or ear lobes. These areas will feel firmer to the touch than usual. Medical attention is necessary and should be received as quickly as possible. Protect the area from contact by wrapping loosely in a dry cloth. Do not rub or try to re-warm the area, this should only be done by medical professionals.

Hypothermia

Hypothermia is an abnormally low body temperature caused by prolonged exposure to cold temperatures. When this occurs, the body has lost heat quicker than it could restore, eventually resulting in using up its energy stores. Although it is generally caused by excessive cold weather, this can also occur in cooler temperatures (above 40°F) if the person has been immersed in cold water or has become wet from rain or excessive sweat. A mild symptom is uncontrollable shivering and should not be ignored.

Further symptoms include loss of coordination, slurred speech, confusion, slow heart rate or breath, and unconsciousness. If not treated, hypothermia will result in death. Hypothermia is especially dangerous because of the effects on the brain. The extremely low body temperature will result in a person's inability to think clearly, they may not understand what is happening and will be unable to do anything about it.

This is a medical emergency that needs immediate response, call 911. Move the employee to a warm, dry area if possible. Remove wet clothing carefully and wrap the person in dry clothes or blankets, cover the whole body including the neck and top of head (do not cover their face). Place hot packs or bottles with warm water in the armpits, along the side of the body and in the groin.

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Cold stress illnesses can happen rapidly anytime, anywhere.

Share these tips with your management team, and ask them to implement these cold safety measures:

- Train workers on how to recognize the environmental factors and workplace conditions that can cause cold stress. Training should also include the symptoms of cold stress illnesses, how to prevent cold stress, first aid procedures, and instructions on how to select proper clothing for cold, wet, and windy conditions.
- Monitor workers physical conditions
- Schedule frequent, short breaks in warm and dry areas to give the body time to warm back up
- Use the buddy system while working
- Provide warm, sweet beverages
- Provide engineering controls (such as radiant heaters) at job sites

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